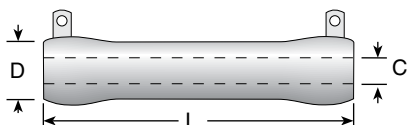


270 Series

Vitreous Enamel Power



See page 36
for mounting
hardware

FEATURES

- Terminals suitable for soldering or bolt connection
- High wattage applications
- Rugged lead free vitreous enamel coating
- Flame resistant coating
- All-welded construction
- RoHS compliant available
- "Fast on" option – see terminal 538, page 37

SPECIFICATIONS

Material

Coating: Lead free vitreous enamel. Very large models (750 watts and up) are supplied in Silicone Ceramic. Also available in low-cost Centohm coating; Consult factory.

Core: Tubular ceramic.

Terminals: Solder coated radial lug. RoHS solder composition is 96% Sn, 3.5% Ag, 0.5% Cu

Derating: Linearly from 100% @ +25°C to 0% @ +350°C.

Electrical

Tolerance:

±5% 1Ω and over (J)
±10% under 1Ω (K)

Power rating: Based on 25°C free air rating.

Overload: 10 times rated wattage for 5 seconds.

Temperature coefficient:

1 to 20Ω: ±400 ppm/°C.
Above 20Ω: ±260 ppm/°C

Dielectric withstanding voltage:

1000 VAC: 12 to 100 watt rating.
3000 VAC: 175 to 225 watt rating (Measured from terminal to mounting bracket)

To calculate max. amps: use the formula $\sqrt{P/R}$

Series	Wattage	Ohms	Dimensions (in. / mm)			Core Code	Voltage	Standard Terminal
			L	D	C			
L12	12	0.1-51K	1.75 / 44.4	0.313 / 7.94	0.188 / 4.76	D	565	57
L25	25	0.15-100K	2.0 / 50.8	0.562 / 14.3	0.313 / 7.94	K	625	40
L50	50	0.38-260K	4.0 / 101.6	0.562 / 14.3	0.313 / 7.94	K	1625	40
L100	100	0.23-101K	6.5 / 165.1	0.750 / 19.1	0.50 / 12.7	M	2845	40
L175	175	0.13-101K	8.5 / 215.9	1.125 / 28.6	0.75 / 19.1	P	3595	46
L225	225	0.16-129K	10.5 / 266.7	1.125 / 28.6	0.75 / 19.1	P	4595	46
L500	500	0.38-218K	12.0 / 304.8	2.50 / 63.5	1.75 / 44.5	S	4970	45
L1000	1000	0.69-392K	20.0 / 508.0	2.50 / 63.5	1.75 / 44.5	S	8900	45

Non-Inductive versions available; Other sizes available; Also available in low cost Centohm or Silicone coating; Consult Ohmite.
* Maximum Voltage is based on Ohm's Law $[V=\sqrt{P \cdot R}]$ as limited by the resistance value of specified product

Select 270 Type fixed resistors for applications requiring wattage ratings from 12 to 1000 watts.

The 270 Type resistors are equipped with lug terminals suitable for soldering or sturdy bolt connection. When secure mounting is required, the hollow core of these resistors permit fastening with spring-type brackets, thru bolts or thru bolts with slotted-steel brackets.

Suitable for rugged applications, the 270 Type resistors feature all-welded construction and durable lead free vitreous enamel coating. Mounting brackets not included with resistors.

ORDERING INFO

Non-Inductive				RoHS Compliant	
F = Fast on (optional)	Blank = Standard	N = Non-inductive			
L	25	J	100	E	
Series	Wattage	Tolerance	Ohms		
Blank = Vitreous		J = 5%	1R0 = 1 Ω		
C = Centohm		K = 10%	250 = 250 Ω		
S = Silicone			1K0 = 1,000 Ω		
			25K = 25,000 Ω		
			25K5 = 25,500 Ω		

MADE-TO-ORDER PARTS

Non-Inductive		Core Diameter		RoHS Compliant	
Blank = Standard	N = Non-inductive	See "Core and Terminal Selection"			
270	50	K	40	5	R00JE
Coating	Wattage	Ohms	Terminal Type	Tolerance	
270 = Vitreous		R500 = 0.500 Ω	See "Resistor Terminals for Tubular Cores"	J = 5%	
470 = Silicone Ceramic		1R00 = 1 Ω		K = 10%	
		250R = 250 Ω			
		1K00 = 1,000 Ω			
		25K0 = 25,000 Ω			
		25K5 = 25,500 Ω			

See website for custom core and terminal info

Power limitations for high resistance values: When resistance exceeds the resistance values listed, derate the Power Rating by 25% to improve reliability:

Power rating	Resistance value	No power derating necessary for ratings higher than 100W.
12W	3,900Ω	
25W	12,000Ω	
50W	35,000Ω	
100W	75,000Ω	

STANDARD PART NUMBERS FOR 270 SERIES

Ohmic value		12 Watt		Ohmic value		12 Watt		Wattage										Wattage									
12 Watt		12 Watt		12 Watt		12 Watt		Ohmic value	Part No.	25	50	100	175	225	500	1000		Ohmic value	Part No.	25	50	100	175	225	500	1000	
0.51	✓	L12JKR51E		180	✓	L12J180E		1	1R0E	✓	✓	✓	✓	✓				2,500	2K5E	✓	✓	✓					
1	✓	L12J1R0E		270	✓	L12J270E		2	2R0E	✓	✓	✓	✓	✓				3,000	3K0E	✓	✓	✓	✓	✓			
3.3	✓	L12J3R3E		330	✓	L12J330E		3	3R0E	✓	✓	✓	✓	✓				3,500	3K5E	✓	✓	✓					
4.7	✓	L12J4R7E		390	✓	L12J390E		4	4R0E	✓	✓	✓	✓	✓				4,000	4K0E	✓	✓	✓					
10	✓	L12J10RE		470	✓	L12J470E		5	5R0E	✓	✓	✓	✓	✓				5,000	5K0E	✓	✓	✓	✓	✓			
12	✓	L12J12RE		560	✓	L12J560E		10	10RE	✓	✓	✓	✓	✓				6,000	6K0E	✓							
15	✓	L12J15RE		1000	✓	L12J1K0E		15	15RE	✓								7,500	7K5E	✓	✓	✓					
22	✓	L12J22RE		1200	✓	L12J1K2E		25	25RE	✓	✓	✓	✓	✓				10,000	10KE	✓	✓	✓	✓	✓			
27	✓	L12J27RE		1500	✓	L12J1K5E		50	50RE	✓	✓	✓	✓	✓				12,000	12KE	✓							
33	✓	L12J33RE		2200	✓	L12J2K2E		75	75RE	✓	✓	✓	✓	✓				15,000	15KE	✓	✓	✓					
47	✓	L12J47RE		2700	✓	L12J2K7E		100	100E	✓	✓	✓	✓	✓				20,000	20KE	✓	✓	✓					
68	✓	L12J68RE		4700	✓	L12J4K7E		125	125E			✓	✓	✓				25,000	25KE	✓	✓						
82	✓	L12J82RE		10000	✓	L12J10KE		150	150E	✓	✓			✓				30,000	30KE			✓					
100	✓	L12J100E		18000	✓	L12J18KE		200	200E	✓	✓							35,000	35KE		✓						
150	✓	L12J150E		22000	✓	L12J22KE		250	250E	✓	✓	✓	✓	✓				40,000	40KE	✓							
				51000	✓	L12J51KE		500	500E	✓	✓	✓	✓	✓				50,000	50KE	✓	✓	✓					
								750	750E	✓	✓	✓		✓				60,000	60KE								
								800	800E	✓	✓							75,000	75KE		✓	✓					
								1,000	1K0E	✓	✓	✓	✓	✓				100,000	100KE	✓		✓	✓	✓	✓		
								1,500	1K5E	✓	✓	✓	✓	✓				150,000	150KE								
								2,000	2K0E	✓	✓	✓	✓	✓				200,000	200KE	✓							
																		250,000	250KE	✓							

✓ = Standard values; check availability using the worldwide inventory search at www.ohmite.com

Red outlined values supplied in Silicone-Ceramic coatings instead of vitreous enamel.